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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/801,557 | 03/17/2004 | Hiroatsu Inui | 0505-1281P | 1901 |
| 2292 | 7590 | 11/10/2005 | EXAMINER | |
| BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | ESHETE, ZELALEM | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3748 | |

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/801,557

Applicant(s)

INUI ET AL.

Examiner

Zelalem Eshete

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-18 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-18 and 20-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This Office Action is in response to the RCE filed on 10/6/2005.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3,11,13,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent (JP62-11294) in view of Nagai (4,524,853).

Regarding claims 1,3: Patent (JP62-11294) discloses a lubricating structure for an OHC internal combustion engine comprising a cam holder, wherein the cam holder includes a nose portion which projects integrally from the cam holder towards a valve stem, the nose portion being an oil feed path for feeding a lubricant to an upper end of a valve (see figure 3). Patent (JP62-11294) further discloses a convex projection protruding downward is formed at an exit of the oil feed path, the projection for dropping the lubricant directly onto the upper end of the valve stem (see figures 3,9).

Patent (JP62-11294) fails to disclose wherein a rear end of the nose portion includes a bent part bending toward a front or a back of the cam holder.

However, Nagai teaches oil direction using bending, in that Nagai teaches oil received on the cam plate guided to the outer edge thereof, and leaves the discharge outlet through the bent portion (see column 9, lines 26 to 30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Patent (JP62-11294) by providing a bent portion as taught by Nagai in order to properly guide the oil flow as taught by Nagai.

Regarding claim 11: Patent (JP62-11294) discloses the claimed invention as recited above; and further discloses an oil feed path for feeding a lubricant to an upper end of a valve stem formed on an inclined upper surface of a rearwardly projecting extension of the cam holder (see figure 3); wherein the rearwardly projecting extension of the cam holder includes a convex shaped projection, the convex shaped projection protruding downward at an exit of the oil feed path in order to drop the lubricant from the oil feed path directly onto the upper end of the valve stem (see figures 9,3).

Patent (JP62-11294) fails to disclose wherein a distal end of the rearwardly projecting extension having a bent part bending toward a front or a back of the cam holder.

However, Nagai teaches oil direction using bending, in that Nagai teaches oil received on the cam plate guided to the outer edge thereof, and leaves the discharge outlet through the bent portion (see column 9, lines 26 to 30).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Patent (JP62-11294) by providing a bent portion as taught by Nagai in order to properly guide the oil flow as taught by Nagai.

Regarding claim 13: Patent (JP62-11294) discloses the oil feed path is an exposed groove cut into the inclined upper surface of the rearwardly projecting extension of the cam holder (see figures 3,9).

Regarding claim 22: Patent (JP62-11294) discloses the nose portion of the cam holder includes an exposed groove, the exposed groove being the oil feed path (see figures 3,9).

3. Claims 1,2,4-6,10-12,14-16,20,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent (JP62-11294) in view of Nagai and further in view of Tsuchida (5,704,330).

Regarding claims 1,3,11: Patent (JP62-11294) as modified above discloses the claimed invention as recited above; however, the figure fails to show the oil flow circuit into the cam holder.

Tsuchida shows the oil flow circuit into the cam holder (see figure 8).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify (JP62-11294) by providing oil flow circuit into the

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cam holder as taught by Tsuchida's in order to make the oil available for lubrication of the valve system as taught by Tsuchida.

Regarding claims 2,12: Tsuchida discloses the oil feed path has an equivalent of a trough-shaped (see figure 8).

Regarding claim 13: Patent (JP62-11294) discloses the oil feed path is an exposed groove cut into the inclined upper surface of the rearwardly projecting extension of the cam holder (see figures 3,9).

Regarding claims 4,14: Tsuchida discloses part of the lubricant for lubricating a cam is supplied to the oil feed path (see figure 9; column 7, lines 27 to 40); through a notch in the cam holder, the notch extending diagonally between a bolt insertion hole and the oil feed path (see figures 8,10; numerals 76,91).

Regarding claims 5,15: Tsuchida discloses the internal combustion engine includes a plurality of valves arranged in a direction of a camshaft, the oil feed path being a plurality of oil feed paths, and wherein each of the valves is formed with an oil path that independently communicates with one of the plurality of oil feed paths (see figures 7,8).

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Regarding claims 6,16: Tsuchida discloses the cam holder rotatably clamps a camshaft with respect to a cylinder head, a bottom side of the cam holder having a mating surface and equivalent to "semi-arcuate" surfaces formed with an oil path allowing the lubricant to flow to a bolt insertion hole leading upward to the oil feed path on an upper side of the cam holder (see figure 8, column 6, lines 7 to 15).

Regarding claims 10,20: Tsuchida discloses the lubricant flowing through the oil feed path is discharged at an exit of the oil feed path, the exit being disposed substantially above the upper end of the valve stem (see figures 9,10).

Regarding claim 22: Patent (JP62-11294) discloses the nose portion of the cam holder includes an exposed groove, the exposed groove being the oil feed path (see figures 3,9).

4. Claims 1-3,5-8,10-13,15-18,20,22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent (JP62-11294) in view of Nagai.

Regarding claims 1,11: Patent (JP62-11294) as modified above discloses the claimed invention as recited above except for "integral" oil feeder/cam holder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to integrate the oil feeder/cam holder, since it has been held that constructing a

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formerly various elements into an integral structure involves only routine skill in the art.

Nerwin v. Erlichman, 168 USPQ 177, 179.

Regarding claims 2,12: Patent (JP62-11294) discloses the oil feed path has an equivalent of a trough-shaped (see figure 3).

Regarding claim 3: Patent (JP62-11294) discloses a convex projection protruding downward is formed at an exit of the oil feed path, the projection for dropping the lubricant directly onto the upper end of the valve stem (see figures 3,9).

Regarding claim 13: Patent (JP62-11294) discloses the oil feed path is an exposed groove cut into the inclined upper surface of the rearwardly projecting extension of the cam holder (see figures 3,9).

Regarding claims 5,15: Patent (JP62-11294) discloses the claimed invention except for duplication of valves/paths. It would have been obvious to one having ordinary skill in the art at the time the invention was made to duplicate the lubrication system for plurality of valves, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding claims 6,16: Patent (JP62-11294) discloses the cam holder rotatably clamps a camshaft with respect to a cylinder head, a bottom side of the cam holder having a mating surface and equivalent to "semi-arcuate" surfaces formed with an oil path allowing the lubricant to flow to a bolt insertion hole leading upward to the oil feed path on an upper side of the cam holder (see figure 3).

Regarding claim 7,17: Patent (JP62-11294) discloses a nose portion is formed on an inclined upper surface of the cam holder so as to project rearwardly, the nose portion being "triangular-shaped" in side view, and having an upper surface inclined downward, in that (JP62-11294) discloses a structure inclined and functions as an oil feeder to the valve stem (see figure 3).

Regarding claim 8,18: (JP62-11294) discloses the oil feed path is formed on the upper surface inclined downward (see figure 3).

Regarding claims 10,20: (JP62-11294) discloses the lubricant flowing through the oil feed path is discharged at an exit of the oil feed path, the exit being disposed substantially above the upper end of the valve stem (see figure 3).

Regarding claim 21: (JP62-11294) discloses the claimed invention as recited above; and further discloses the nose portion being "triangular" shaped in side view,

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and having an upper surface inclined downward on which the oil feed path is formed (see figure 3).

Patent (JP62-11294) fails to disclose wherein a rear end of the nose portion bent toward a front or a back of the cam holder.

However, Nagai teaches oil direction using bending, in that Nagai teaches oil received on the cam plate guided to the outer edge thereof, and leaves the discharge outlet through the bent portion (see column 9, lines 26 to 30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Patent (JP62-11294) by providing a bent portion as taught by Nagai in order to properly guide the oil flow as taught by Nagai.

Regarding claim 22: Patent (JP62-11294) discloses the nose portion of the cam holder includes an exposed groove, the exposed groove being the oil feed path (see figures 3,9).

Response to Arguments

5. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

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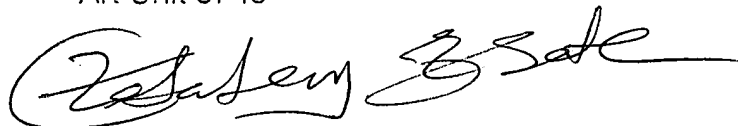
Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zelalem Eshete
Examiner
Art Unit 3748




THOMAS DENION
SUPERVISORY PATENT EXAMINER
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